

Amendment/Response

Reply to Notice of Allowability of July 30, 2004

Amendment to the Specification

Please add a new paragraph on page 5 after line 17:

B₁ Fig. 3 is a flow diagram showing the steps of an embodiment of the invention.

Please add a new paragraph on page 11 at line 22:

B₂ Referring to Fig. 3, the method of the invention is shown. In step 40, the cover image is divided into a plurality of disjoint groups of adjacent samples. Then in step 42, a discrimination function is defined that assigns a real number to each member of the disjoint groups, thereby capturing the smoothness of each of the groups. In step 44, at least one invertible operation is defined on the disjoint groups, with the invertible operation including a permutation of sample values, whereby values of the samples are invertibly perturbed by a small amount. In step 46, the discrimination function and the invertible operation are applied to define in step 48 three types of sample groups in the disjoint groups, i.e., (R)egular, (S)ingular, and (U)nusable, with each of the types being defined for both positive and negative operations. In step 50, both positive and negative R and S are plotted for the alleged cover image on an RS diagram, after which four curves of the RS diagram are constructed and their intersections are calculated by extrapolation in step 52. Finally, in step 54, the existence or nonexistence of a secret message is determined from the intersections.